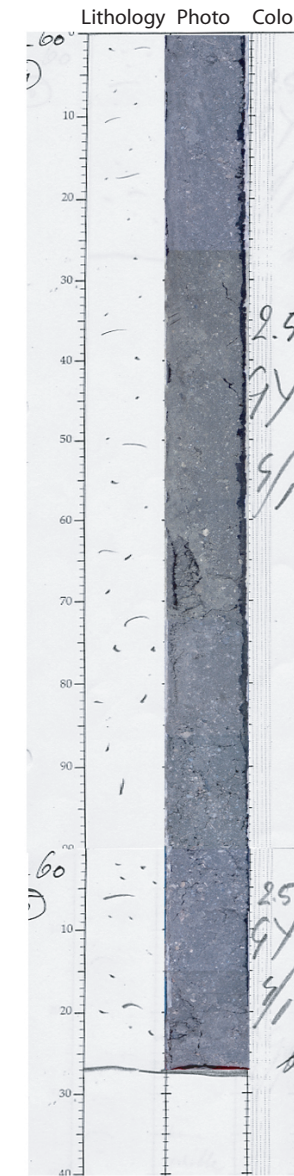


Core ID: NF02-A4-60 Total Length (cm): 427  
Described by: D. Beets (06/02)



Water Depth: 6.4 m (21 ft)

Total Length: 427 cm; core is cut in half with the upper portion measuring 300 cm and the lower portion measuring 127 cm.

Unit 1  
0 - 186:

Monotonous succession of bluish greenish-gray colored (10 BG 4/1), medium grained ( $d_{50} \sim 250 - 350 \mu\text{m}$ ), reasonably well-sorted and close-packed sand with up to 10 % shells and shell fragments, among which many are juveniles. Grains are subrounded. Shells and shell fragments occur at random throughout the sand. Bedding is absent.

Depositional environment is likely open marine/shoreface

Boundary separating this sand unit from the one below has been deformed but is likely sharp.

Unit 2  
186 - 427:

Monotonous succession of yellowish-greenish-gray (2.5 GY 4/1), well-sorted and well-packed, fine-grained ( $d_{50} \sim 180 - 250 \mu\text{m}$ ) sand with 5 - 10 % shells and shell fragments. The detrital grains, predominantly quartz with few percent opaques, are subrounded to rounded. Locally, a vague bedding is seen from the alignment of shell fragments and small differences in grain size.

Depositional environment is likely open marine/shoreface

The main differences between the upper and lower sand sequences are grain size and color.

Figure 15. Sidescan-sonar coverage overlain by surficial sediment thickness grid (upper left, location outlined in Figure 7), showing the distribution of surficial sediment within the inner continental shelf offshore of Murrells Inlet. Sediment within the shoals is thickest (4 - 6 m) near the mouth of the inlet, and generally thins seaward. In several offshore locations however, localized accumulations exceed 3 m. Vibracore sample NF02-A4-60 (above, location upper left and in Figure 7) illustrates the type of sediment within the shoals, which is predominantly medium to fine grained sands containing ~ 10 % shell fragments. An ~ 1.5 m discrepancy in sediment thickness is indicated between the core sample and the thickness grid at this location. This may be due to sediment moving into the area between the times of acquisition (from '99 - '00 to '02), or inadequate resolution within the SIS-1000 sub-bottom data. Sidescan-sonar coverage overlain by thickness of channel fill (lower left, location outlined in Figure 7) illustrates the Murrells Inlet incised valley that underlies the inlet associated shoal complex. Channel incisions within this incised valley comprise a complex integrated drainage network with multiple thalweg features. Seismic profiles F - F' and G - G', depicted in Figure 13 (outlined lower left, and in Figure 7), provide vertical cross sections of these sub-surface features. (Vibracore images and descriptions provided by Coastal Carolina University, Gayes 2002, pers. comm.)